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(54) **METHOD OF GENERATING A COMPUTER ARCHITECTURE REPRESENTATION IN A REUSABLE SYNTAX AND GRAMMAR**

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G06F 9/45	(2006.01)
G06F 9/445	(2006.01)
G06F 7/04	(2006.01)
G06F 17/30	(2006.01)
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CPC .. ***G06F 8/20*** (2013.01); ***G06F 8/31*** (2013.01); ***G06F 8/41*** (2013.01); ***G06Q 10/00*** (2013.01)

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CPC G06F 17/5068; G06F 17/5072; G06F 17/5077; G06F 17/30569; G06F 11/1433; G06F 11/2247; G06F 8/10; G06F 8/60; G06F 8/63; G06F 8/314; G06F 9/44505; G06F 21/6218; G06F 8/61; G06F 17/3089; G06F 11/263; G06F 17/5045; G06F 8/36; G06F 8/47; G06F 8/447; G06Q 10/087

See application file for complete search history.

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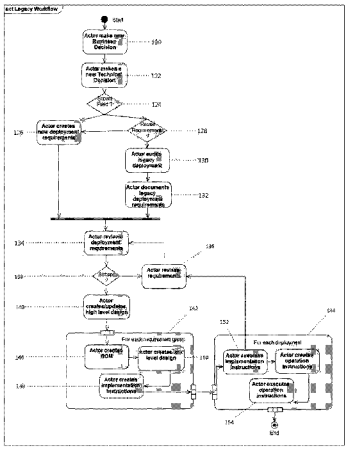
(57) **ABSTRACT**

Techniques and a system for creating a vendor independent computer language and compiling the language into an architecture specification language allowing for taking a source data stream (file, wsdl, xml) and passing thru a language parser, populating a storage medium with a plurality of technical inputs and vendor technical specifications for generic technologies and probable technologies required for desired architectures generated by the language parser, and optimizing the inputs and creating relationships between technologies and groups of technologies and storing results in said storage medium.

19 Claims, 6 Drawing Sheets



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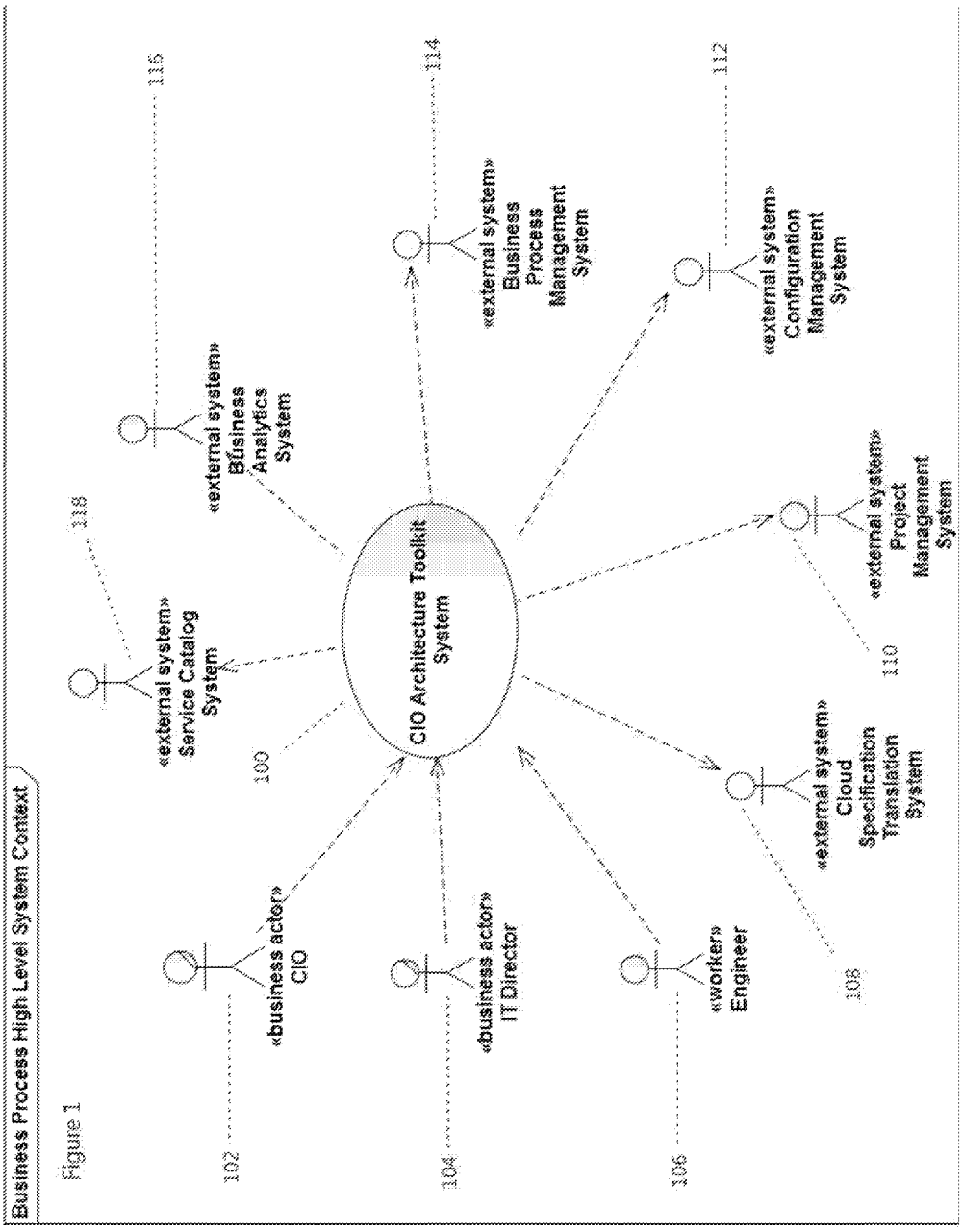
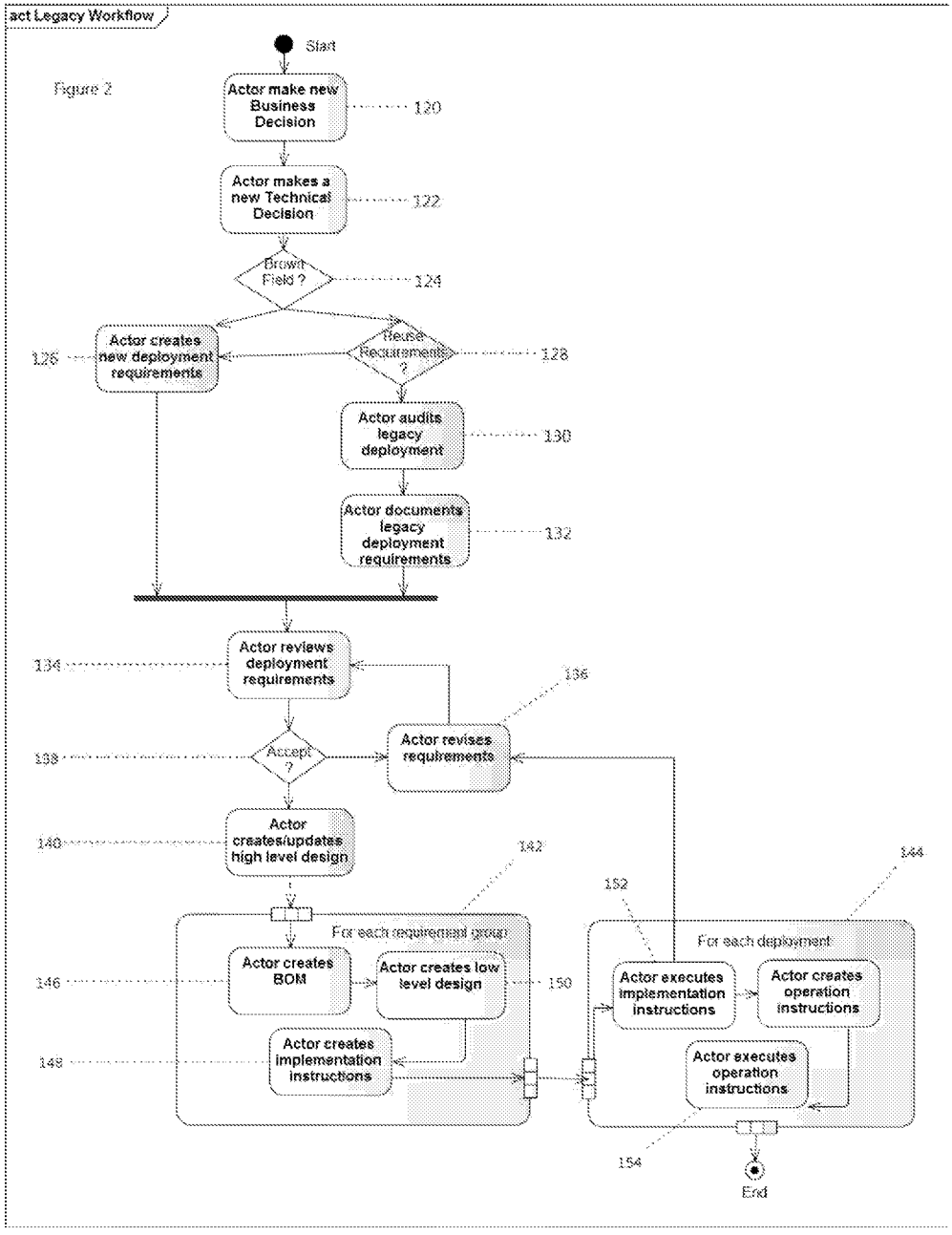

Business Process High Level System Context
CIO Architecture Toolkit System
100
«business actor» CIO
102
«business actor» IT Director
104
«worker» Engineer
106
«external system» Cloud Specification Translation System
108
«external system» Project Management System
110
«external system» Configuration Management System
112
«external system» Business Process Management System
114
«external system» Business Analytics System
116
«external system» Service Catalog System
118

Figure 1


act Legacy Workflow
Start
Figure 2
Actor make new Business Decision
120
Actor makes a new Technical Decision
122
Brown Field ?
124
Reuse Requirements ?
126
Actor creates new deployment requirements
128
Actor audits legacy deployment
130
Actor documents legacy deployment requirements
132
Actor reviews deployment requirements
134
136
Accept ?
138
Actor revises requirements
Actor creates/updates high level design
140
142
144
152
For each requirement group
For each deployment
Actor creates BOM
Actor creates low level design
146
150
Actor creates implementation instructions
148
Actor executes implementation instructions
Actor creates operation instructions
Actor executes operation instructions
154
End

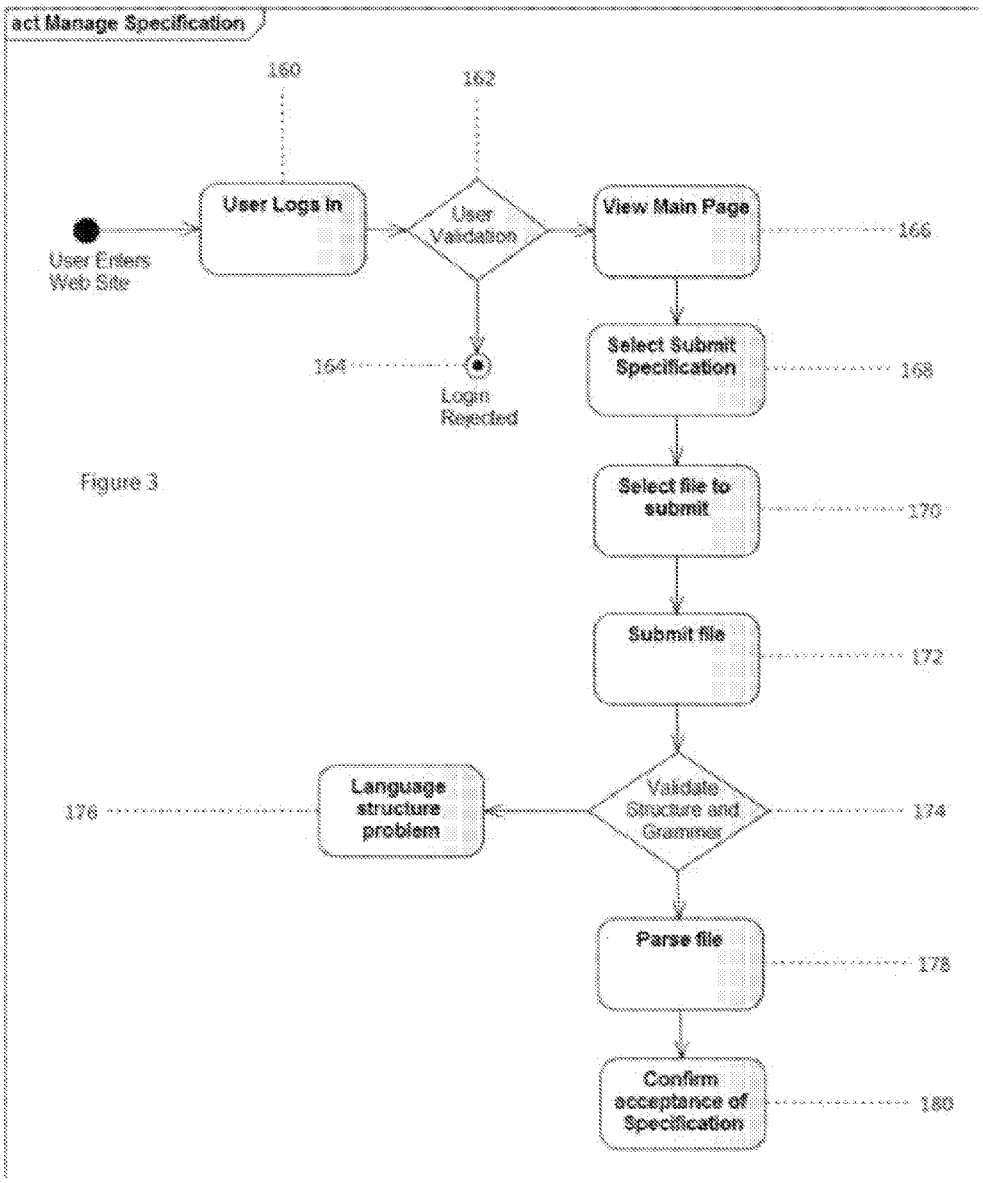

act Manage Specification
160
162
User Logs In
User Validation
View Main Page
166
User Enters Web Site
164
Login Rejected
Select Submit Specification
168
Select file to submit
170
Submit file
172
Language structure problem
176
Validate Structure and Grammar
174
Parse file
178
Confirm acceptance of Specification
180

Figure 3

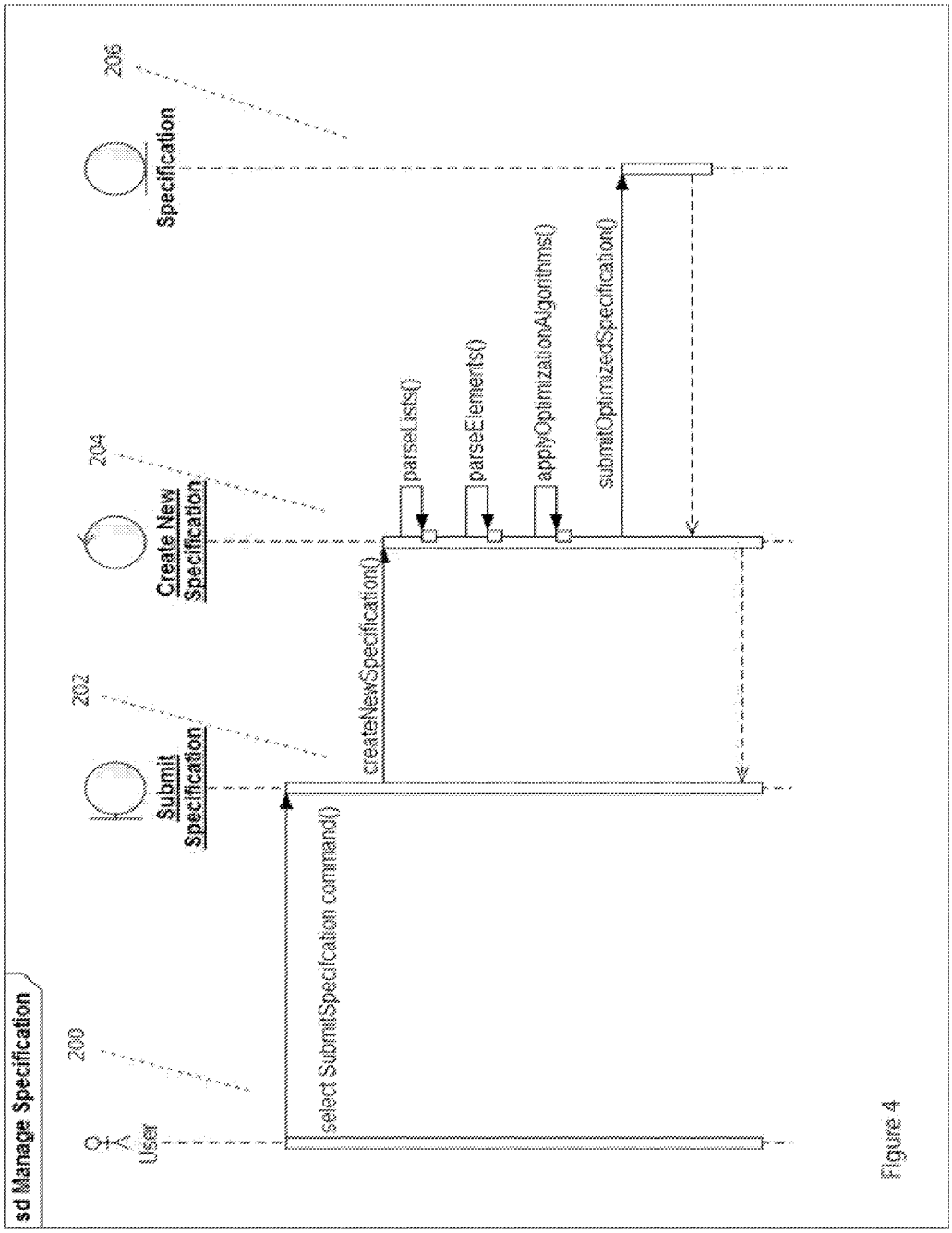

sd Manage Specification
200
User
202
Submit Specification
204
Create New Specification
206
Specification
select SubmitSpecification command()
createNewSpecification()
parseLists()
parseElements()
applyOptimizationAlgorithms()
submitOptimizedSpecification()

Figure 4

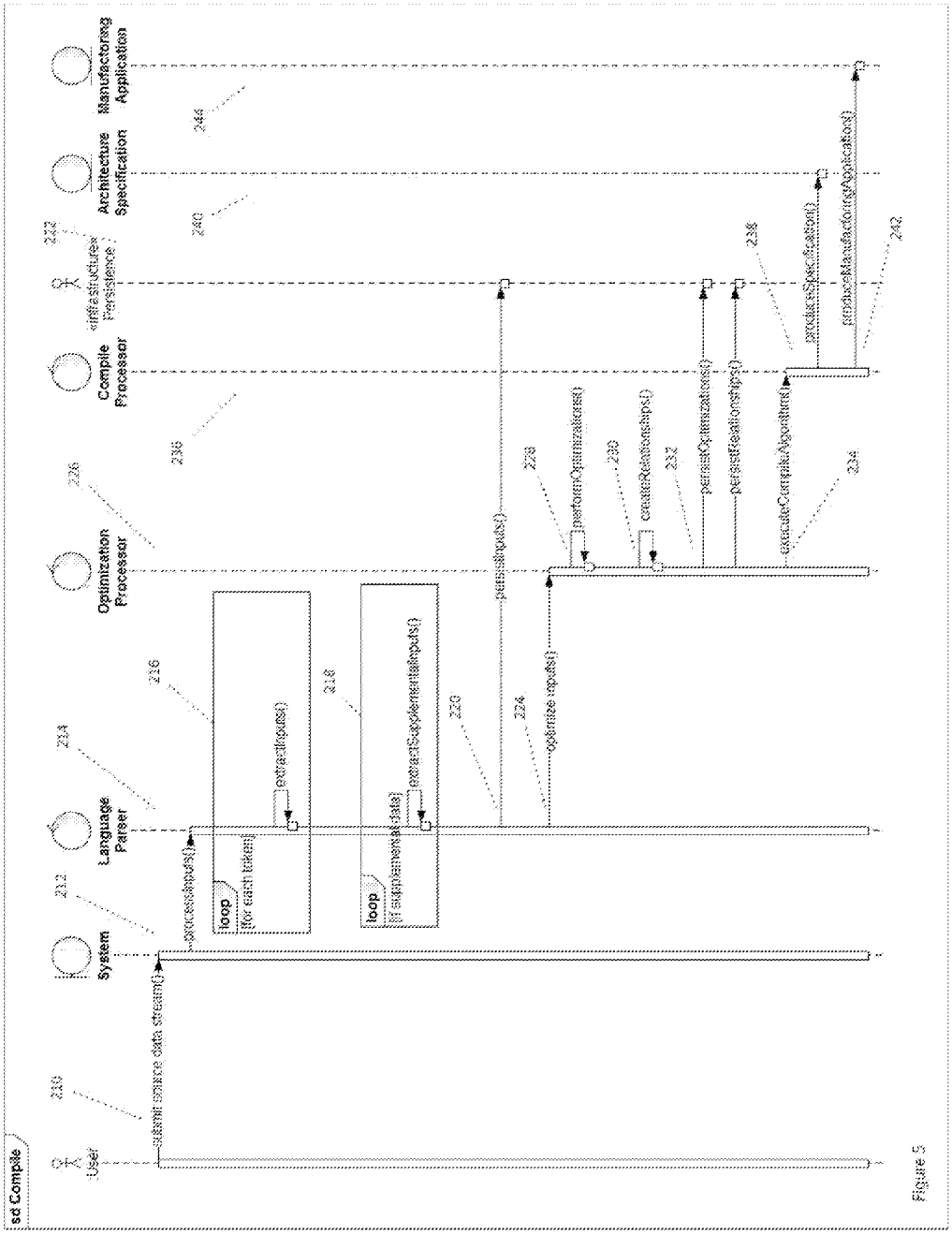

sd Compile
User
System
Language Parser
Optimization Processor
Compile Processor
Architecture Specification
Manufacturing Application
submit source data stream()
processInputs()
loop
[for each token]
extractInputs()
loop
[if supplemental data]
extractSupplementalInputs()
persistInputs()
performOptimizations()
createRelationships()
persistOptimizations()
persistRelationships()
generateCompileAlgorithm()
produceSpecification()
produceManufacturingApplication()

Figure 5

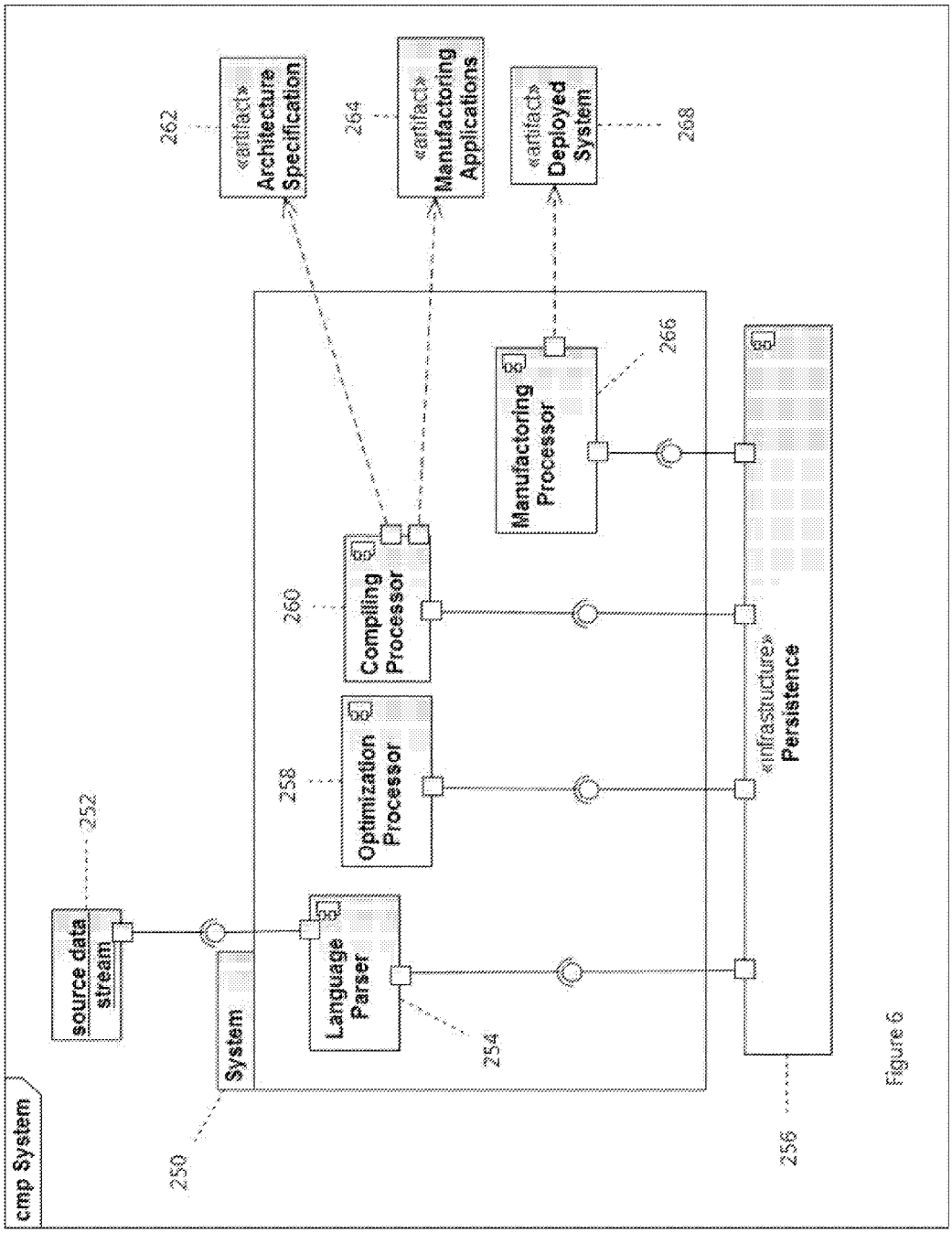

cmp System
«artifact» Architecture Specification
«artifact» Manufactoring Applications
«artifact» Deployed System
262
264
268
Manufactoring Processor
266
Compiling Processor
260
Optimization Processor
258
Language Parser
254
System
250
source data stream
252
«infrastructure» Persistence
256

Figure 6

METHOD OF GENERATING A COMPUTER ARCHITECTURE REPRESENTATION IN A REUSABLE SYNTAX AND GRAMMAR

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority to U.S. Provisional Patent Application Ser. No. 61/800,272, and U.S. Provisional Patent Application Ser. No. 61/800,387, both filed on Mar. 15, 2013, which are hereby incorporated by reference in its entirety. Other related applications having common inventorship and/or ownership as may mentioned throughout this disclosure, are also incorporated by reference in their entirety.

FIELD

The disclosed subject matter relates to methods of generating a computer architecture representation in a reusable syntax and grammar. As a result the invention also includes an enhanced means of creating artifacts such as high-level design documents, bills of materials and traditional drawings.

DESCRIPTION OF THE RELATED ART

The traditional method is for users to provide an engineer with goals, decisions and constraints and for the engineer to use vendor specification and his individual knowledge and experience to generate a high-level design. A user makes a business decision to deploy a particular application or technology. The user must make a series of business and technical decisions including if they will perform a completely new deployment and design or use an existing one. The requirements, decisions, and constraints are gathered, reviewed, accepted. The accepted requirements, decisions, and constraints are presented to an engineer who uses his knowledge and reference material to generate a high-level design. The problem that this creates is that high-level designs can be very specific to a customer and technology. If the end user decides to transition from one technology to another they have to have another design created potentially by a completely different engineer with the appropriate knowledge based on the desired technology. A significant amount of the information gathered and generated for the initial design is not retained and usable for subsequent designs.

SUMMARY

Techniques here disclosed include a method and system for generating a computer architecture representation in a reusable syntax and grammar. As a result the invention also includes an enhanced means of creating artifacts such as high-level design documents, bills of materials and traditional drawings.

The present invention provides a method of generating a computer architecture representation in a reusable syntax and grammar, wherein a plurality of language definitions that include at least a first language definition for technical specifications and attributes. This information is typically submitted by an engineer, and comes in the form of multiple specifications and may include vendor technical specifications, best practices, and corporate best practices. Technical Specifications for applications may include but are not limited to details such as: memory require, disk space required. Technical specifications for operating systems may include but are not limited to: hardware limitations such as required physical memory, processor type. Industry best practice details may include but are not limited to: that although the vendor recommends a certain amount of memory for an application, the industry best practice is 2 times that amount.

The term "technical specification" is understood herein as any data that is provided by an engineer or manufacturer, detailing technology including but not limited to operating system requirements, application requirements, or hardware requirements. As an exemplary scenario, a technical specification for Windows 2012 Server may specify minimum processor: 1.4 Ghz 64-bit processor, minimum ram: 512 MB, minimum disk: 32 GB.

In accordance with an embodiment of the invention the method provides a second language definition for business details and attributes. This information is typically provided by the user and includes but not limited to goals, decisions, constraints, site details and user details. A decision may include but are not limited to: a selection of a particular vendor. Business details may include but are not limited to: number of locations, size of locations, and users at locations.

The term "business details" and "business attributes" is understood herein as any data that is provided by a user that is specific to their business environment. As an exemplary scenario, a business attribute may specify to use the industry best practice over the vendor specification.

In accordance with a further embodiment of the invention the method provides a third language definition supplementary details and attributes. This information is custom data that can be customer or implementation dependent. An example supplemental detail may be able to be to a specific vendor or technology bias.

The term "supplementary details" and "supplementary attributes" is understood herein as any data that is provided by a user as custom data. As a exemplary scenario, a user may specify a operating system or manufacturer bias. such as Microsoft is a preferred vendor. Algorithms selected at runtime may use this supplemental data for decisions.

In an embodiment of the invention, the method provides for parsing and performing semantic grammar analysis for each of the language definitions that consist of reading each line of input, parsing and performing semantic grammar analysis of attributes of the specification, elements or lines, element lists/groups and attributes of the list/group, individual elements or lines and attributes of the elements, and finally individual lines or elements within a list/group and any attributes of that element and produce an intermediate representation as reusable individual elements and attributes. In Embodiments of the invention the method includes a means of deconstructing these specifications into re-usable elements, which provides the advantage that elements may be re-used in a plurality of designs.

In an embodiment of the invention, the method has a means for dynamically compile and generate an architectural specification based on user selected data, the produced intermediate representation, and an algorithm selected at run time that consists of reading each input variable and passing those variables to the specified algorithm. The algorithm processes the individual elements and attributes based on the defined algorithm. The output of the selected algorithm is then passed to the compiler to generate the architecture specification in a specific language definition.

The term "architecture representation" is understood herein as a data structure for storing and representing the data contained in a high-level deign in a generic reusable way.

In accordance with a further embodiment of the invention, the method has a means for dynamically compile and generate an architectural specification based on user selected data, the produced intermediate representation, supplemental

details and attributes, and an algorithm selected at run time that consists of reading each input variable and passing those variables to the specified algorithm. The algorithm processes the individual elements and attributes based on the defined algorithm. The output of the selected algorithm is then passed to the compiler to generate the architecture specification in a specific language definition.

In accordance with a further embodiment of the invention, the method provides a means for dynamically generating industry standard technical documents from a generated architecture specification.

In another aspect the invention is directed to a system implementing the above described language specifications, methods and compiler mechanism.

Embodiments of the invention have the advantage that different architectures are capable of being generated rapidly based on a broader set of technical and engineering inputs than the conventional methods.

In accordance with an embodiment of the invention, the system further provides means for receiving a source data stream of input information from the user. Memory means allow for a data structure instantiating code segment that establishes a storage record in memory, as well as for storing technical input records, business input records, relationships, and architecture specification language representation. A processor means operates for parsing and performing semantic grammar analysis for each of the language definitions, as well as recording parsed results to the storage medium. The processor means further enables executing a selected optimization function to optimize and create relationships and saving the results to the storage medium. The disclosure includes executing a compilation function to compute and create an architectural representation in the specified syntax and grammar

In accordance with a further embodiment of the invention, the system further provides means for receiving a source data stream of input information from the user. Memory means enable a data structure instantiating code segment that establishes a storage record in memory and for storing technical input records, business input records, relationships, supplemental details and attributes, and architecture specification language representation. A processor means operates parsing and performing semantic grammar analysis for each of the language definitions including supplemental details and attributes, recording parsed results to the storage medium, executing a selected optimization function to optimize and create relationships and save results to the storage medium, as well as executing a compilation function to compute and create an architectural representation in the specified syntax and grammar.

These and other advantages of the disclosed subject matter, as well as additional novel features, will be apparent from the description provided herein. The intent of this summary is not to be a comprehensive description of the claimed subject matter, but rather to provide a short overview of some of the subject matter's functionality. Other systems, methods, features, and advantages here provided will become apparent to one with skill in the art upon examination of the following FIGUREs and detailed description. It is intended that all such additional systems, methods, features and advantages be included within this description, be within the scope of the accompanying claims.

BRIEF DESCRIPTIONS OF THE DRAWINGS

The features, nature, and advantages of the disclosed subject matter will become more apparent from the detailed description set forth below when taken in conjunction with the drawings in which like reference characters identify correspondingly throughout and wherein:

In the following, embodiments of the invention are explained in greater detail by way of example only, making reference to the drawings which:

FIG. **1** provides a UML use case diagram being illustrative of an embodiment of a method of the invention.

FIG. **2** is a UML activity diagram being illustrative of the conventional workflow for creating a high-level design.

FIG. **3** is a UML activity diagram being illustrative of an embodiment of a method of submitting a specification for use as part of the body of reusable information.

FIG. **4** is a UML sequence diagram being illustrative of an embodiment of a method of processing or deconstructing a specification.

FIG. **5** is a UML sequence diagram being illustrative of an embodiment of a method of the invention.

FIG. **6** is a UML component diagram being illustrative of an embodiment of a computer system of the invention

APPENDIX 1 shows exemplary grammar for a specification file

APPENDIX 2 shows exemplary grammar for a specification file

APPENDIX 3 shows a shows exemplary implementation of the grammar in APPENDIX 1 but in xml as an alternative format.

DETAILED DESCRIPTION OF THE SPECIFIC EMBODIMENTS

FIG. **1** is illustrative of an embodiment where an actor Element **106** and shows the information flow from the engineer into the method represented as Element **100**. FIG. **1** also shows other actors that may interface with the method in a exemplary embodiment.

FIG. **2**, is illustrative of an embodiment where an actor **102**, **104**, or **106** from FIG. **1** makes a business decision to deploy a particular application or technology **120**. An actor **102**, **104** or **106** from FIG. **1**, takes that business decision as input and make a series of technical decisions **122**. The actor must make a decision **124** if the deployment is a new deployment or a deployment over an existing "Brown Field". If the deployment is a new deployment **126** then a new set of requirements are developed. If there is an existing deployment the actor must make a decision **128** to reuse existing requirements. If the actor chooses not to reuse existing requirements then the deployment is treated as a new deployment **126** and a new set of requirements are developed. If the actor chooses to reuse the existing requirements then an audit of the legacy deployment must be performed **130** and the requirements documented **132**. The actor reviews the resulting requirements **134** for acceptance **138**. If they do not meet the business decisions **120** and technical decisions **122** then they are not accepted **138** the requirements are revised **136**. If the requirements are accepted **138**, the actor generates by hand a high-level design document **140** based on his individual knowledge and experience. An actor then takes this high-level design, and for each requirement contained in the high-level design **142** he determines the necessary equipment, creates a Bill of Material **146**, creates a low level design **150**, and creates implementation instructions **148**. To deploy the system, for each system to be deployed **144**, the actor takes the implementation instructions **148** and executes them **152** to create the systems. He then creates operating instructions **156** for operating the systems and executes those **154** to place the system under operational management.

FIG. **3** is illustrative of an embodiment where an actor submits a specification for use by the exemplary embodiment as part of the body of reusable information. Elements **160** thru **168** represent an interaction with the user interface of the system. An actor **106** from FIG. **1** attempts to access the system **160**. If authentication **162** fails, the access is denied **164**. If authentication **162** is successful, the main page **166** is displayed. The user selects select a specification file **168** and selects a specification file for use **170**. The user then submits the file **172** for use. Lexical and syntactical analysis is performed on the submitted data to determine if the data is a valid structure and grammatical syntax **174**. If the lexical or syntactical analysis fails there is a language or structure problem **176**. If the lexical and syntactical analysis passes then the file is parsed **178** and the information retained for later use. A positive confirmation is provided of acceptance of the specification **180**.

FIG. **4** is illustrative of an embodiment where a user **200** interacts with the system via the Submit Specification boundary **202**. The Create New Specification control **204** mediates between the Submit Specification boundary **202** and the Specification entity **206** and orchestrates the behavior including but not limited to the parsing of the lists, elements and execution of the algorithms.

FIG. **5** is illustrative of an embodiment where an actor interacts with the system via the System boundary **212**. The Language Parser control **214** receives the inputs from the System boundary **212** and processes the inputs. The Language Parser control **214** loops thru the specification and extracts the inputs. If supplemental data is present in the source data stream the Language Parser control **214** loops thru the specification and extracts supplemental data and attributes. Once the inputs have been extracted the Language Parser control **214** persists the inputs to Persistence actor **222** via the persistInputs( ) message **220**. The Language Parser control **214** then passes control to the Optimization Processor control **226** to performOptimizations( ) **228** of inputs and createRelationships( ) **230**. The Optimization Processor control **226** then persistOptimizations( ) **232** and persistRelationships( ) to persist the data to the Persistence actor **222**. Once the Optimization processor control **226** has persisted its data it passes control to the Compile processor control **236**. The Compile Processor control **236** produces either a Architecture Specification entity **240** or a Manufacturing Application entity **244** depending on the embodiment.

FIG. **6** is illustrative of an embodiment where a source data stream object **252** is submitted to the computer System **250** via a computer network for processing. The Language Parser component **254** is invoked and uses the system processor to calculate and extract the inputs from the data stream. The Language Parser component **254** persists its data to the Persistence component **256** which may be a database or system memory data structure. The Optimization Processor component **258** is invoked to retrieve the inputs from the Persistence component **256** and uses the system processor to execute an optimization algorithm and create necessary relationships. The Optimization Processor component **258** persists its data to the Persistence component **256**. The Compiling Processor component **260** is invoked to retrieve the optimized inputs and relationships from the Persistence component **256** and uses the system processor to execute a compilation algorithm to generate either an Architecture Specification artifact **262** or a Manufacturing Applications artifact depending on the embodiment. In a further embodiment of the system the Manufacturing Processor component **266** will be invoked to use the system processor to execute the Manufacturing Applications artifacts **264** to create the Deployed Systems artifact **268**.

To facilitate the processing of specifications a new grammar and syntax may be required. The listing in APPENDIX 1 and APPENDIX are examplary grammar for a specification file that may be used as inputs to the methods described in FIG. **3** and FIG. **4**. The listing in APPENDIX 3 shows a possible implementation of the grammar in APPENDIX 1 but in xml as an alternative format.

In summary, the present disclosure provides a method and system for creating a vendor independent computer language and compiling the computer language into an architecture specification language, including the steps of taking a source data stream (FILE, WSDL, XML) and passing thru a language parser, populating a storage medium with a plurality of technical inputs and vendor technical specifications for generic technologies and probable technologies required for desired architectures generated by the language parser, optimizing the inputs and creating relationships between technologies and groups of technologies and storing results in the storage medium.

The processing features and functions described herein provide for generating a computer architecture representation in a reusable syntax and grammar. The disclosed subject matter provides an enhanced means of creating artifacts such as high-level design documents, bills of materials and traditional drawings that may be implemented in various manners. Moreover, the process and features here described may be stored in magnetic, optical, or other recording media for reading and execution by such various signal and instruction processing systems. The foregoing description of the preferred embodiments, therefore, is provided to enable any person skilled in the art to make or use the claimed subject matter. Thus, the claimed subject matter is not intended to be limited to the embodiments shown herein but is to be accorded the widest scope consistent with the principles and novel features disclosed herein.

APPENDIX 1

Example Specification Language Structure

```
%token STRING
specification:
        attribute_element requirement_element
    |   attribute_element requirement_element_list
requirement_element
    ;
attribute_element:
        element TYPE literal
    ;
requirement_element_list:
        requirement_element
    |   requirement_element_list requirement_element
    ;
requirment_element:
        element
    ;
element:
        VALUE literal
literal:
        STRING
```

APPENDIX 2

Example Architecture Specification Language Structure

```
%token STRING
architecturespecification:
        attribute_element deployment_element
    |   attribute_element_list deployment_element
    |   attribute_element deployment_element_list
deployment_element
    |   attribute_element_list deployment_element_list
        attribute element deployment element
    ;
attribute_element_list:
        attribute_element
    |   attribute_element_list attribute_element
    ;
attribute_element:
        element TYPE literal
    ;
deployment_element_list:
        deployment_element
    |   deployment_element_list deployment_element
    ;
deployment_element:
        DEPLOYMENT literal
    |   DEPLOYMENT literal TYPE literal
    ;
provider_element_list:
        provider_element
    |   provider_element_list provider_element
    ;
provider_element:
        PROVIDER literal
    |   PROVIDER literal TYPE literal
    ;
hypervisor_element_list:
        hypervisor_element
    |   hypervisor_element_list hypervisor_element
    ;
hypervisor_element:
        HYPERVISOR literal
    |   HYPERVISOR literal TYPE literal
    ;
os_element_list:
        os_element
    |   os_element_list os_element
    ;
os_element:
        OS literal
    |   OS literal TYPE literal
    ;
application_list:
        application_element
    |   application_element_list application_element
    ;
application_element:
        APPLICATION literal
    |   APPICATION literal TYPE literal
    ;
element:
        NAME literal
    |   NAME literal TYPE literal
literal:
        STRING
```

APPENDIX 3

Example XML specification

```
<TechnicalSpecification
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="TS.xsd">
    <RequirementGroup>
        <Value>Windows Server 2007</Value>
        <Attribute>
            <Type>Sequence</Type>
            <Value>1</Value>
        </Attribute>
        <SubRequirementGroup>
            <Requirement>
                <Value>Memory</Value>
                <Attribute>
                    <Type>Sequence</Type>
                    <Value>1</Value>
                </Attribute>
                <Attribute>
                    <Type>Minumum</Type>
                    <Value>2048</Value>
                </Attribute>
                <Attribute>
                    <Type>Recommeded</Type>
                    <Value>4096</Value>
                </Attribute>
            </Requirement>
            <Requirement>
                <Value>Disk</Value>
                <Attribute>
                    <Type>Sequence</Type>
                    <Value>2</Value>
                </Attribute>
                <Attribute>
                    <Type>Minumum</Type>
                    <Value>8G</Value>
                </Attribute>
                <Attribute>
                    <Type>Recommeded</Type>
                    <Value>20G</Value>
                </Attribute>
            </Requirement>
        </SubRequirementGroup>
    </RequirementGroup>
</VendorTechnicalSpecification>
```

What is claimed is:

1. A non-transitory computer-accessible for creating a vendor independent computer language, comprising:

a data structure instantiating code segment for establishing a storage record in memory having:

a technical identifier, the technical identifier providing identification for the following:

hardware grouping;

software grouping; and

combinations thereof;

a plurality of technical input records,

each of said plurality of technical input records maintaining a pointer in memory to said technical identifier; and

a lexical and syntactical analysis algorithm, said lexical and syntactical analysis algorithm for determining said plurality of technical input records match a valid structure and grammatical syntax.

2. The non-transitory computer-accessible medium of claim **1**, further comprising computer instructions for:

passing a source data stream through a language parser; and

populating a storage medium with at least a portion of the plurality of technical input records an plurality of vendor technical specifications;

said plurality input records and a plurality of vendor technical specifications

for an architecture generated by said lexical and syntactical analysis algorithm.

3. The non-transitory computer-accessible medium of claim **2**, further comprising computer in ions for:

optimizing at least a portion of said plurality of technical input records and said plurality of vendor technical specifications;

creating relationships between said at least a portion of the plurality of technical input records and said plurality of vendor technical specifications; and

storing an optimized result in said computer-accessible medium.

4. The non-transitory computer-accessible medium of claim **2**, further comprising computer instructions for:

further populating said storage medium with a business input for a customer.

5. The non-transitory computer-accessible medium of claim **2**, further comprising computer instructions for:

further populating said storage medium with supplemental attributes.

6. The non-transitory computer-accessible medium of claim **5**, further comprising

said lexical and syntactical analysis algorithm communicating with said storage medium and coupled to a compute network;

said lexical and syntactical analysis algorithm for parsing said plurality of vendor technical specifications and said plurality of technical input records into individual inputs and value pairs; and

recording said individual inputs a value pairs to the storage medium.

7. The non-transitory computer-accessible medium of claim **2**, further comprising computer instructions for:

a compiling processor communicating with said storage medium and coupled to a computer network;

said compiling processor for retrieving at least one input from the storage medium and providing a plurality of technology choices based on said at least one input to an architecture delivery server; and

said compiling processor for generating an architecture in an architecture specification language based on the said at least one input.

8. The non-transitory computer-accessible medium of claim **7**, further comprising computer instructions for:

an optimization processor communicating with said storage medium and coupled to a computer network;

said optimization processor for optimizing said architecture to provide an optimized architecture; and

said optimization processor for recording said optimized architecture to the storage medium.

9. The non-transitory computer-accessible medium of claim **8**, further comprising computer instructions for:

said lexical and said lexical and syntactical analysis algorithm communicating with said storage medium and coupled to a computer network;

said lexical and syntactical analysis algorithm for parsing ness inputs and business goals into individual inputs and value pairs; and

said lexical and syntactical analysis algorithm for recording said individual inputs and said value pairs to the storage medium.

10. A non-transitory computer-accessible medium for creating an architecture specification language, comprising:

a data structure instantiating code segment that establishes a storage record in memory, said data structure instantiating code segment comprising:

an architecture specification identifier;

a plurality of technical input records and business input records, each of said plurality of technical input records and business input records maintaining a respective pointer in memory to said architecture specification identifier;

a lexical and syntactical analysis algorithm, said lexical and syntactical analysis algorithm configured for determining said plurality of technical input records and business input records matching a valid structure and grammatical syntax; and

a compiling algorithm, said compiling algorithm configured for:

identifying at least one technology and input required to create the architecture; and

compiling said architecture specification language representation of architecture.

11. The non-transitory computer-accessible medium of claim **10**, further comprising computer instructions for:

passing a source data stream through a language parser; and

populating a storage medium with the plurality of technical input records and the plurality of vendor technical specifications for architectures generated by the language parser.

12. The non-transitory computer-accessible medium of claim **11**, further comprising computer instructions for:

optimizing at least a portion of said plurality of technical input records and said plurality of vendor technical specifications;

creating relationships between said at least a portion of the plurality of technical input records and said plurality of vendor technical specifications; and

storing an optimized result in said computer-accessible medium.

13. The non-transitory computer-accessible medium of claim **11**, further comprising computer instructions for:

further populating said computer-accessible medium with at least one business input and business goal definition for a customer.

14. The non-transitory computer-accessible medium of claim **11**, further comprising computer instructions for:

further populating said computer-accessible medium with supplemental attributes.

15. The non-transitory computer-accessible medium of claim **14**, further comprising computer instructions for:

a language parser communicating with said storage media and coupled to a computer network;

said language parser for parsing vendor technical specifications and technical inputs into individual inputs and value pairs; and

recording said individual inputs and said value pairs to the computer-accessible medium.

16. The non-transit computer-accessible medium of claim **11**, further comprising computer instructions for:

employing a compiling algorithm to retrieve at least one input from the computer-accessible medium, suggest technology choices based on a received business input and business goal, and produce an architecture in an architecture specification language.

17. The non-transitory computer-accessible medium of claim **16**, further comprising computer instructions for:

an optimization processor communicating with said computer-accessible medium and coupled to a computer network;

said optimization processor for optimizing at least parsed inputs and creating relationships; and

recording those inputs to the computer-accessible medium.

18. The non-transitory computer-accessible medium of claim **17**, further comprising computer instructions for:

a compiling processor communicating with said computer-accessible medium and coupled to a computer network;

said compiling processor for retrieving inputs from the computer-accessible medium and providing technology choices based on inputs to an architecture delivery

server and generating an architecture in an architecture specification language based on the inputs.

19. The non-transitory computer-accessible medium of claim **18**, further comprising computer instructions for:

a language parser communicating with said storage medium and coupled to a computer network;

said language parser for parsing business inputs and business goals into individual inputs and value pairs; and

recording said individual inputs and said value pairs to the computer-accessible medium.

* * * * *